

IN THE CLAIMS

Amended claims follow:

1-6. (Cancelled)

7. (Currently Amended) A computer program product embodied on a tangible computer readable medium for controlling a computer to detect malware, said computer program product comprising:

file access request receiving logic operable to receive at an assessment computer a file access clearance request from a requesting computer, said file access clearance request including data identifying a computer file to be accessed by said requesting computer;

file access clearance response generating logic operable in dependence upon said data identifying said computer file to determine if said computer file has previously been assessed as not containing malware and to generate a file access clearance response; and

file access clearance response transmitting logic operable to transmit said file access clearance response to said requesting computer;

wherein said assessment computer stores a database of computer files and said database includes for each computer file a persistence flag indicating whether an entry relating to said computer file should be purged from said database during purge operations;

wherein said database includes for each computer file fields specifying a filename of said computer file, data identifying said requesting computer and a storage location of said computer file, and a checksum value calculated from said computer file;

wherein said assessment computer is operable in at least a higher level security mode and a lower level security mode, said assessment computer serving to deny access to a greater range of computer files when operating in said higher level security mode compared with said lower level security mode.

8. (Previously Presented) A computer program product as claimed in claim 7, wherein said data identifying said computer file includes said checksum value calculated from said computer file.

9. (Previously Presented) A computer program product as claimed in claim 7, wherein said data identifying said computer file includes one or more of said filename of said computer file, said data identifying said requesting computer and said storage location of said computer file.

10. (Original) A computer program product as claimed in claim 7, wherein if said file access clearance response indicates a scan of said computer file is required by said assessment computer, then computer file receiving logic is operable to receive at said assessment computer said computer file from said requesting computer and performing a malware scan of said computer file.

11. (Original) A computer program product as claimed in claim 7, wherein if said file access clearance response indicates access to said computer file is denied, then triggering a denied access response in said assessment computer.

12. (Previously Presented) A computer program product as claimed in claim 7, wherein said database of computer files specifies whether respective computer files contain malware.

13. (Previously Presented) A computer program product as claimed in claim 12, wherein said database further includes for each computer file another field specifying an access flag indicating whether access to said computer file is denied.

14. (Cancelled)

15. (Currently Amended) A computer program product as claimed in claim [[14]], wherein said assessment computer is triggered to change from said lower level

security mode to said higher level security mode by a lock down trigger message received at said assessment computer from a remote computer.

16. (Currently Amended) A computer program product as claimed in claim 7, wherein a plurality of requesting computers share access to [[an]]said assessment computer for determining whether file access requests by those requesting computers should be denied.

17. (Currently Amended) A computer program product embodied on a tangible computer readable medium for controlling a computer to detect malware, said computer program product comprising:

- file access request detecting logic operable to detect a file access request to a computer file by a requesting computer;

- file access clearance request generating logic operable to generate a file access clearance request including data identifying said computer file;

- file access clearance request transmitting logic operable to transmit said file access clearance request from said requesting computer to an assessment computer responsible for assessment of whether said computer file contains malware;

- file access clearance request receiving logic operable to receive at said assessment computer said file access clearance request from a requesting computer;

- file access clearance response generating logic operable in dependence upon said data identifying said computer file to determine if said computer file has previously been assessed as not containing malware and to generate a file access clearance response;

- file access clearance response transmitting logic operable to transmit said file access clearance response to said requesting computer;

- file access clearance response receiving logic operable to receive at said requesting computer said file access clearance response from said assessment computer;

and

- file access permitting logic operable if said file access clearance response indicates said computer file does not contain malware to permit said file access request by said requesting computer;

wherein said assessment computer stores a database of computer files and said database includes for each computer file a persistence flag indicating whether an entry relating to said computer file should be purged from said database during purge operations;

wherein said database includes for each computer file fields specifying a filename of said computer file, data identifying said requesting computer and a storage location of said computer file, and a checksum value calculated from said computer file;

wherein said assessment computer is operable in at least a higher level security mode and a lower level security mode, said assessment computer serving to deny access to a greater range of computer files when operating in said higher level security mode compared with said lower level security mode.

18. (Previously Presented) A computer program product as claimed in claim 17, wherein said data identifying said computer file includes said checksum value calculated from said computer file.

19. (Previously Presented) A computer program product as claimed in claim 17, wherein said data identifying said computer file includes one or more of said filename of said computer file, said data identifying said requesting computer and said storage location of said computer file.

20. (Original) A computer program product as claimed in claim 17, wherein if said file access clearance response indicates a scan of said computer file is required by said assessment computer, then computer file transmitting logic is operable to transmit said computer file from said requesting computer to said assessment computer, receiving at said assessment computer said computer file from said requesting computer and performing a malware scan of said computer file.

21. (Original) A computer program product as claimed in claim 17, wherein if said file access clearance response indicates access to said computer file is denied, then triggering a denied access response in said assessment computer.

22. (Original) A computer program product as claimed in claim 17, wherein if said file access clearance response indicates access to said computer file is denied, then triggering a denied access response in said requesting computer.

23. (Previously Presented) A computer program product as claimed in claim 17, wherein said database of computer files specifies whether respective computer files contain malware.

24. (Previously Presented) A computer program product as claimed in claim 23, wherein said database further includes for each computer file another field specifying an access flag indicating whether access to said computer file is denied.

25. (Cancelled)

26. (Currently Amended) A computer program product as claimed in claim [[25]]7, wherein said assessment computer is triggered to change from said lower level security mode to said higher level security mode by a lock down trigger message received at said assessment computer from a remote computer.

27. (Currently Amended) A computer program product as claimed in claim 17, wherein a plurality of requesting computers share access to [[an]]said assessment computer for determining whether file access requests by those requesting computers should be denied.

28-33. (Cancelled)

34. (Currently Amended) A method of detecting malware, said method comprising the steps of:

receiving at an assessment computer a file access clearance request from a requesting computer, said file access clearance request including data identifying a computer file to be accessed by said requesting computer;

in dependence upon said data identifying said computer file determining if said computer file has previously been assessed as not containing malware and generating a file access clearance response; and

transmitting said file access clearance response to said requesting computer;

wherein said assessment computer stores a database of computer files and said database includes for each computer file a persistence flag indicating whether an entry relating to said computer file should be purged from said database during purge operations;

wherein said database includes for each computer file fields specifying a filename of said computer file, data identifying said requesting computer and a storage location of said computer file, and a checksum value calculated from said computer file;

wherein said assessment computer is operable in at least a higher level security mode and a lower level security mode, said assessment computer serving to deny access to a greater range of computer files when operating in said higher level security mode compared with said lower level security mode.

35. (Previously Presented) A method as claimed in claim 34, wherein said data identifying said computer file includes said checksum value calculated from said computer file.

36. (Previously Presented) A method as claimed in claim 34, wherein said data identifying said computer file includes one or more of said filename of said computer file, said data identifying said requesting computer and said storage location of said computer file.

37. (Previously Presented) A method as claimed in claim 34, wherein if said file access clearance response indicates a scan of said computer file is required by said

assessment computer, then receiving at said assessment computer said computer file from said requesting computer and performing a malware scan of said computer file.

38. (Previously Presented) A method as claimed in claim 34, wherein if said file access clearance response indicates access to said computer file is denied, then triggering a denied access response in said assessment computer.

39. (Previously Presented) A method as claimed in claim 34, wherein said database of computer files specifies whether respective computer files contain malware.

40. (Previously Presented) A method as claimed in claim 39, wherein said database further includes for each computer file another field specifying an access flag indicating whether access to said computer file is denied.

41. (Cancelled)

42. (Currently Amended) A method as claimed in claim ~~[[41]]~~34, wherein said assessment computer is triggered to change from said lower level security mode to said higher level security mode by a lock down trigger message received at said assessment computer from a remote computer.

43. (Currently Amended) A method as claimed in claim 34, wherein a plurality of requesting computers share access to ~~[[an]]~~said assessment computer for determining whether file access requests by those requesting computers should be denied.

44. (Currently Amended) A method of detecting malware, said method comprising the steps of:
detecting a file access request to a computer file by a requesting computer;
generating a file access clearance request including data identifying said computer file;

transmitting said file access clearance request from said requesting computer to an assessment computer responsible for assessment of whether said computer file contains malware;

receiving at said assessment computer said file access clearance request from a requesting computer;

in dependence upon said data identifying said computer file determining if said computer file has previously been assessed as not containing malware and generating a file access clearance response;

transmitting said file access clearance response to said requesting computer;

receiving at said requesting computer said file access clearance response from said assessment computer; and

if said file access clearance response indicates said computer file does not contain malware, then permitting said file access request by said requesting computer;

wherein said assessment computer stores a database of computer files and said database includes for each computer file a persistence flag indicating whether an entry relating to said computer file should be purged from said database during purge operations;

wherein said database includes for each computer file fields specifying a filename of said computer file, data identifying said requesting computer and a storage location of said computer file, and a checksum value calculated from said computer file;

wherein said assessment computer is operable in at least a higher level security mode and a lower level security mode, said assessment computer serving to deny access to a greater range of computer files when operating in said higher level security mode compared with said lower level security mode.

45. (Previously Presented) A method as claimed in claim 44, wherein said data identifying said computer file includes said checksum value calculated from said computer file.

46. (Previously Presented) A method as claimed in claim 44, wherein said data identifying said computer file includes one or more of said filename of said computer

file, said data identifying said requesting computer and said storage location of said computer file.

47. (Previously Presented) A method as claimed in claim 44, wherein if said file access clearance response indicates a scan of said computer file is required by said assessment computer, then transmitting said computer file from said requesting computer to said assessment computer, receiving at said assessment computer said computer file from said requesting computer and performing a malware scan of said computer file.

48. (Previously Presented) A method as claimed in claim 44, wherein if said file access clearance response indicates access to said computer file is denied, then triggering a denied access response in said assessment computer.

49. (Previously Presented) A method as claimed in claim 44, wherein if said file access clearance response indicates access to said computer file is denied, then triggering a denied access response in said requesting computer.

50. (Previously Presented) A method as claimed in claim 44, wherein said database of computer files specifies whether respective computer files contain malware.

51. (Previously Presented) A method as claimed in claim 50, wherein said database further includes for each computer file another field specifying an access flag indicating whether access to said computer file is denied.

52. (Cancelled)

53. (Currently Amended) A method as claimed in claim ~~[[52]]~~44, wherein said assessment computer is triggered to change from said lower level security mode to said higher level security mode by a lock down trigger message received at said assessment computer from a remote computer.

54. (Currently Amended) A method as claimed in claim 44, wherein a plurality of requesting computers share access to [[an]]said assessment computer for determining whether file access requests by those requesting computers should be denied.

55-60. (Cancelled)

61. (Currently Amended) Apparatus for controlling a computer to detect malware, said apparatus comprising:

a file access request receiver operable to receive at an assessment computer a file access clearance request from a requesting computer, said file access clearance request including data identifying a computer file to be accessed by said requesting computer;

a file access clearance response generator operable in dependence upon said data identifying said computer file to determine if said computer file has previously been assessed as not containing malware and to generate a file access clearance response; and

a file access clearance response transmitter operable to transmit said file access clearance response to said requesting computer;

wherein said assessment computer stores a database of computer files and said database includes for each computer file a persistence flag indicating whether an entry relating to said computer file should be purged from said database during purge operations;

wherein said database includes for each computer file fields specifying a filename of said computer file, data identifying said requesting computer and a storage location of said computer file, and a checksum value calculated from said computer file;

wherein said assessment computer is operable in at least a higher level security mode and a lower level security mode, said assessment computer serving to deny access to a greater range of computer files when operating in said higher level security mode compared with said lower level security mode.

62. (Previously Presented) Apparatus as claimed in claim 61, wherein said data identifying said computer file includes said checksum value calculated from said computer file.

63. (Previously Presented) Apparatus as claimed in claim 61, wherein said data identifying said computer file includes one or more of said filename of said computer file, said data identifying said requesting computer and said storage location of said computer file.

64. (Previously Presented) Apparatus as claimed in claim 61, wherein if said file access clearance response indicates a scan of said computer file is required by said assessment computer, then a computer file receiver is operable to receive at said assessment computer said computer file from said requesting computer and performing a malware scan of said computer file.

65. (Previously Presented) Apparatus as claimed in claim 61, wherein if said file access clearance response indicates access to said computer file is denied, then triggering a denied access response in said assessment computer.

66. (Previously Presented) Apparatus as claimed in claim 61, wherein said database of computer files specifies whether respective computer files contain malware.

67. (Currently Amended) Apparatus as claimed in claim 66, wherein said database further includes for each computer file another field specifying an access flag indicating whether access to said computer file is denied.

68. (Cancelled)

69. (Currently Amended) Apparatus as claimed in claim ~~[[68]]~~61, wherein said assessment computer is triggered to change from said lower level security mode to said higher level security mode by a lock down trigger message received at said assessment computer from a remote computer.

70. (Currently Amended) Apparatus as claimed in claim 61, wherein a plurality of requesting computers share access to [[an]]said assessment computer for determining whether file access requests by those requesting computers should be denied.

71. (Currently Amended) Apparatus for controlling a computer to detect malware, said apparatus comprising:

- a file access request detector operable to detect a file access request to a computer file by a requesting computer;

- a file access clearance request generator operable to generate a file access clearance request including data identifying said computer file;

- a file access clearance request transmitter operable to transmit said file access clearance request from said requesting computer to an assessment computer responsible for assessment of whether said computer file contains malware;

- a file access clearance request receiver operable to receive at said assessment computer said file access clearance request from a requesting computer;

- a file access clearance response generator operable in dependence upon said data identifying said computer file to determine if said computer file has previously been assessed as not containing malware and to generate a file access clearance response;

- a file access clearance response transmitter operable to transmit said file access clearance response to said requesting computer;

- a file access clearance response receiver operable to receive at said requesting computer said file access clearance response from said assessment computer; and

- a file access permission unit operable if said file access clearance response indicates said computer file does not contain malware to permit said file access request by said requesting computer;

wherein said assessment computer stores a database of computer files and said database includes for each computer file a persistence flag indicating whether an entry relating to said computer file should be purged from said database during purge operations;

wherein said database includes for each computer file fields specifying a filename of said computer file, data identifying said requesting computer and a storage location of said computer file, and a checksum value calculated from said computer file;

wherein said assessment computer is operable in at least a higher level security mode and a lower level security mode, said assessment computer serving to deny access to a greater range of computer files when operating in said higher level security mode compared with said lower level security mode.

72. (Previously Presented) Apparatus as claimed in claim 71, wherein said data identifying said computer file includes said checksum value calculated from said computer file.

73. (Previously Presented) Apparatus as claimed in claim 71, wherein said data identifying said computer file includes one or more of said filename of said computer file, said data identifying said requesting computer and said storage location of said computer file.

74. (Previously Presented) Apparatus as claimed in claim 71, wherein if said file access clearance response indicates a scan of said computer file is required by said assessment computer, then a computer file transmitter is operable to transmit said computer file from said requesting computer to said assessment computer, receiving at said assessment computer said computer file from said requesting computer and performing a malware scan of said computer file.

75. (Previously Presented) Apparatus as claimed in claim 71, wherein if said file access clearance response indicates access to said computer file is denied, then triggering a denied access response in said assessment computer.

76. (Previously Presented) Apparatus as claimed in claim 71, wherein if said file access clearance response indicates access to said computer file is denied, then triggering a denied access response in said requesting computer.

77. (Previously Presented) Apparatus as claimed in claim 71, wherein said database of computer files specifies whether respective computer files contain malware.

78. (Currently Amended) Apparatus as claimed in claim 77, wherein said database further includes for each computer file another field specifying an access flag indicating whether access to said computer file is denied.

79. (Cancelled)

80. (Currently Amended) Apparatus as claimed in claim ~~[[79]]~~71, wherein said assessment computer is triggered to change from said lower level security mode to said higher level security mode by a lock down trigger message received at said assessment computer from a remote computer.

81. (Currently Amended) Apparatus as claimed in claim 71, wherein a plurality of requesting computers share access to ~~[[an]]~~said assessment computer for determining whether file access requests by those requesting computers should be denied.

82. (Cancelled)

83. (New) A computer program product as claimed in claim 11, wherein said file access clearance response indicates access to said computer file is denied if said computer file has previously been identified as containing malware, and said denied access response includes deletion of said computer file.

84. (New) A computer program product as claimed in claim 7, wherein said higher level security mode includes banning access to at least one predetermined computer file type.